

# Vatsa Patel

Software Engineer | Masters in CS student

San Francisco Bay Area  
vatsa.patel@sjsu.edu  
+1 408 471 7539  
/VatsaPatel

## Experience

### 3D RoomSpace | Software Engineering Intern

Los Angeles, CA • May 2020 - Aug 2020

- Developed core services for the rental platform to automate leasing, manage listings, deploy contracts on blockchain.
- Rearchitected and migrated independent services under a scalable Kubernetes environment.

Tech Stack: GCP Cloud run, Kubernetes Engine | Node, GraphQL | React Native, React, Gatsby | DynamoDB

### Contractor Software Engineer

San Francisco, CA • May 2020 - Present

- **UniversityEats**: Building service using Plaid to automatically analyze spendings from all linked banks and set goals.
- **PodSource**, SF: Helped move to a scalable serverless architecture reducing monthly bills by 72%.
- Built a tool to automatically tag and push docker images to 8 different Container Registries with multiple logins.

### A D Patel Institute of Technology | Software Engineer

#### Learning Management Platform

Part-Time • Aug 2017 - Sept 2018

- Engineered highly-available backend services that are architected to scale even on low-end hardware.
- Deployed an in-house private Cloud cluster using OpenStack that can scale-up or scale-down based on load and also providing IaaS for other student projects.
- Created a custom network authentication service integrating with internal IAM and auto-assigning bandwidth and QoS based on access level.

Tech Stack: React, React Native, Electron | NodeJS, Golang | MemSQL, HBase, Aerospike.

#### ADIT Alumni Hub

Part-Time • Aug 2016 - Mar 2018

- Designed & Developed a social platform from scratch to allow Alumni to reconnect with each other, discover other alumni in same region and profession, share jobs & events. **Attained 6,400 users within first 3 months.**

Tech Stack: React, JQuery | PHP, NodeJS | MySQL, Memcached

### Smarq Technologies

Nov 2015 - May 2016

- Ideated a startup at Qualcomm incubator which was selected in the top-10 startup ideas out of thousands of applicants.
- Smarq: tightly-knit ecosystem of smart sensors capable of automation sequences based on local location of user.

### Purva Couture | Software Developer

Aug 2015 - Dec 2015

- Single-handedly developed a cloud-based Business Operations system that managed from Sales to Production to Deliveries handling 700+ clients & revenue of \$1M+.

## Projects

### SlackHR

Feb 2020 - May 2020

- Developed a Slack plugin application that helps combat abusive conduct at a workplace backed by a Multi-Label classifier using Neural Network. **Currently used at IBM research team's Slack.**

### Reverse proxy to increase downlink bandwidth

Aug 2019 - Sep 2019

- Developed a reverse proxy that substantially minimizes the effect of Bandwidth Delay Product on TCP Throughput by buffering the file on multiple connections.
- Preliminarily achieved 8x improvement in streaming on intercontinental bandwidth with BBR congestion control.

### Federated Learning - Privacy Enhanced Collaborative Machine Learning

Jan 2019 - Aug 2019

- Optimized Federated Averaging Algorithm optimized for Large-Scale LSTM-CNN when the input consists of large number of small-sized updates in Homomorphic Encryption.
- Submitted and got invited to present my research paper in IEEE.

## Skills

Backend: NodeJS, PHP, Python, Java, C++ Database: SQL : MySQL, Postgres | NoSQL : MongoDB, Redis, DynamoDB

DevOps: AWS, GCP, Docker, Kubernetes, CI/CD, Chef, Kafka, Spark Frontend: React, React-Native, Android

## Education

### San Jose State University

Jan 2020 - Dec 2021 Expected

Candidate for Masters in Computer Science. **Current GPA: 3.85**

Dual Specialization: Cloud Computing and Network Programming

### Gujarat Technological University

Jul 2015 - Jul 2019

Bachelor of Engineering in Computer Science. **GPA: 3.97**